

REMARKS/ARGUMENTS

The Examiner is thanked for his kind allowance of claims 21-35.

The Examiner is also thanked for his kind finding of allowable subject matter in claims 2-9 and 2-17 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim Amendment

Claims 1 and 11 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention.

Claims 2 and 12 have been rewritten into independent form so as to include all of the limitations of the base claims 1 and 11, respectively.

Claims 3-5, 7-8, and 10 have been amended to depend from claim 2.

Claims 13-15, 18 and 20 have been amended to depend from claim 12.

The amendment also contains minor changes of a clerical nature. No "new matter" has been added by the amendment.

Claim Objections

Claims 3, 11, 13 and 23 stand objected to because of minor informalities. The claims have been amended to correct the minor informalities in accordance with the Examiner's suggestion. With this amendment, it is respectfully requested the objections be withdrawn.

Claims 2-9 and 12-17 stand objected to as being dependent upon a rejected base claim. Claims 2 and 12 have been amended into independent form so as to include all of the limitations of the respective base claims in order to place these claims in condition for allowance in accordance with the Examiner's suggestion. Claims 3-9 and 13-17, as amended, directly or indirectly depend from claim 2 and 12, respectively, and thus they also include all of the limitations of the respective base claims and any intervening claims. Accordingly, it is respectfully asserted that the claims are now in condition for allowance.

The 35 U.S.C. §102 Rejection

Claims 1, 10-11 and 18-20 stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Pedersen et al. (U.S. Pat. No. 6,134,705), among which claims 1 and 11 are independent claims. This rejection is respectfully traversed.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 869 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). *See also*, M.P.E.P. §2131.

Claim 1, as amended, defines a method for implementing a change to a circuit design for a system formed on a semiconductor chip, the system including at least one circuit core implementing an existing circuit design. The claimed method includes, (a) providing in the

system at least one field programmable gate array (FPGA) core in addition to said at least one circuit core, (b) extracting an incremental change to the circuit design by comparing a new resister-transfer-level (RTL) design and an existing RTL design for the system, (c) synthesizing said incremental change into a netlist, (d) generating new metal layer interconnections so as to provide an input and an output for said at least one FPGA core in accordance with said incremental change, and (e) programming said at least one FPGA core in accordance with the netlist, the programmed FPGA core and the new metal interconnections implementing the incremental change, as recited in claim 1 as amended.

Pedersen allegedly discloses generating a sub-netlist for use in incremental compilation. The Examiner especially alleges, in the Office Action, that column 9, lines 4-9 and 43-45 of Pedersen discloses synthesizing said incremental change into a netlist, and column 7, lines 31-34 of Pederson discloses programming said at least one FPGA core in accordance with the netlist.

However, column 7, lines 31-34 of Pederson only describes that in case of programmable integrated circuits (such as PLDs) an electronic design defines both of the gate function and interconnects to be programmed on the target hardware device. Thus, Pedersen merely teaches the target hardware device may be programmable circuits. In Pedersen, the initial/original circuit design (initial compilation stage 335) and the changed/modified circuit design (incremental compilation stage 340) are both implemented or mapped onto the same target hardware device (column 9, lines 51-56, column 10, lines 46-60). If the changed design does not fit onto the same target hardware device, Pedersen's process ends (column 11, lines 1-3). Therefore, although Pedersen might disclose a sub-netlist defining a "changed" portion of the design (column 10,

lines 51-52), the synthesized sub-netlist replaces a corresponding portion of the original synthesized netlist (column 11, lines 48-49), and the synthesized netlist (incorporating the changes) is mapped onto the target hardware devices, preserving the original fitting as much as possible (column 11, lines 57-59).

Accordingly, Pedersen only uses the same target hardware device for the original and the changed design. In other words, the incremental change is implemented in the same original target hardware device and not using any additional programmable device, or FPGA. Thus, Pedersen fails to disclose or teach providing at least one FPGA core in addition to said at least one circuit core, where the programmed FPGA core and the new metal interconnections implementing the incremental change, as recited in claim 1.

Claim 11, as amended, also includes substantially the same distinctive feature as claim 1. Therefore, it is respectfully requested that the rejection of claims based on Pedersen be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Dependent Claims

Claim 10 (as well as claims 3-9) now depends from claim 2, and claims 18-20 (as well as claim 13-17) depend upon claim 12, where claims 2 and 12 are now allowable claims in independent form. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
THELEN REID & PRIEST, LLP

Dated: December 15, 2003



Masako Ando
Limited Recognition under 37 CFR §10.9(b)

Thelen Reid & Priest LLP
P.O. Box 640640
San Jose, CA 95164-0640
Tel. (408) 292-5800
Fax. (408) 287-8040